aiwa

COMPACT DISC STEREO SYSTEM

Z-HT540

OPERATING INSTRUCTIONS

R·D·S EON

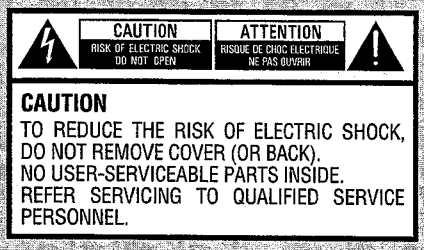
COMPACT disc DIGITAL AUDIO

8B-MAS-901-01
010214AKP-P9

K

WARNING

TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

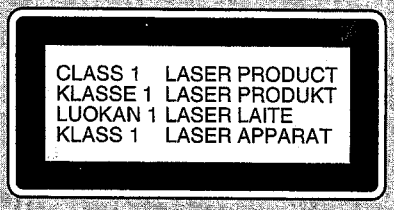


CAUTION
TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

This compact disc player is classified as a CLASS 1 LASER product.
The CLASS 1 LASER PRODUCT label is located on the exterior.



CAUTION!

Invisible laser radiation when open and inter locks defeated. Avoid exposure to beam.

PRECAUTIONS

Read the Operating Instructions carefully and completely before operating the unit. Be sure to keep the Operating Instructions for future reference. All warnings and cautions in the Operating Instructions and on the unit should be strictly followed, as well as the safety suggestions below.

Installation

1 **Water and moisture** — Do not use this unit near water, such as near a bathtub, washbowl, swimming pool, or the like.
2 **Heat** — Do not use this unit near sources of heat, including heating vents, stoves, or other appliances that generate heat. It also should not be placed in temperatures less than 5°C (41°F) or greater than 35°C (95°F).
3 **Mounting surface** — Place the unit on a flat, even surface.
4 **Ventilation** — The unit should be situated with adequate space around it so that proper heat ventilation is assured. Allow 10 cm (4 in.) clearance from the rear and the top of the unit, and 5 cm (2 in.) from each side.
- Do not place the unit on a bed, rug, or similar surface that may block the ventilation openings.
- Do not install the unit in a bookcase, cabinet, or airtight rack where ventilation may be impeded.

5 **Objects and liquid entry** — Take care that objects or liquids do not get inside the unit through the ventilation openings.
6 **Carts and stands** — When placed or mounted on a stand or cart, the unit should be moved with care.
Quick stops, excessive force, and uneven surfaces may cause the unit or cart to overturn or fall.
7 **Condensation** — Moisture may form on the CD pickup lens when:
- The unit is moved from a cold spot to a warm spot
- The heating system has just been turned on
- The unit is used in a very humid room
- The unit is cooled by an air conditioner

When this unit has condensation inside, it may not function normally. Should this occur, leave the unit for a few hours, then try to operate again.
8 **Wall or ceiling mounting** — The unit should not be mounted on a wall or ceiling, unless specified in the Operating Instructions.

WARNING

This appliance is supplied with a fitted three pin mains plug. A 5 amp fuse is fitted in the plug.
Should the fuse need to be replaced, use a 5 amp fuse approved by ASTA or BSI to BS1362. When replacing the fuse, you must ensure that any removable fuse covers are correctly refitted.
If you should lose the fuse cover, please contact your nearest AIWA dealer.

DO NOT CUT OFF THE PLUG FROM THIS APPLIANCE. If the plug fitted is not suitable for the power points in your home, or the cable is too short to reach a power point, obtain an appropriate safety approved extension lead or adaptor. If in any doubt please consult a qualified electrician.

If the plug is cut off, remove the fuse and dispose of the plug immediately. **THERE IS A DANGER OF SEVERE ELECTRICAL SHOCK IF THE CUT OFF PLUG IS INSERTED INTO ANY 13 AMP SOCKET.**

If a new plug is to be fitted please ensure it contains a 5 amp fuse, otherwise the circuit should be protected by a 5 amp fuse at the distribution board.

IMPORTANT

The wires in the mains lead are coloured in accordance with the following code:

BLUE — NEUTRAL
BROWN — LIVE

As the colours of the wires in the mains lead of this appliance may not correspond with the colour markings identifying the terminals in your plug, proceed as follows:

The wire which is coloured BLUE must be connected to the terminal which is marked by the letter N or coloured BLACK.

The wire which is coloured BROWN must be connected to the terminal which is marked by the letter L or coloured RED.

DO NOT connect either the BLUE or BROWN wires in the mains lead to the earth terminal (marked with the letter E or by the earth symbol ⏚ or coloured GREEN or GREEN/YELLOW) of a three pin plug.

Electric Power

1 **Power sources** — Connect this unit only to power sources specified in the Operating Instructions, and as marked on the unit.

2 **AC power cord**
- When disconnecting the AC power cord, pull it out by the AC power plug. Do not pull the cord itself.
- Never handle the AC power plug with wet hands, as this could result in fire or shock.
- Power cords should be firmly secured to avoid being severely bent, pinched, or walked upon. Pay particular attention to the cord from the unit to the power outlet.
- Avoid overloading AC power plugs and extension cords beyond their capacity, as this could result in fire or shock.

3 **When not in use** — Unplug the AC power cord from the power outlet if the unit will not be used for several months or more. When the cord is plugged in, a small amount of current continues to flow to the unit, even when the power is turned off.

Maintenance

Clean the unit only as recommended in the Operating Instructions.

Damage Requiring Service

Have the units serviced by a qualified service technician if:
- The AC power cord or plug has been damaged
- Foreign objects or liquid have got inside the unit
- The unit has been exposed to rain or water
- The unit does not seem to operate normally
- The unit exhibits a marked change in performance
- The unit has been dropped, or the cabinet has been damaged

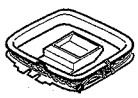
DO NOT ATTEMPT TO SERVICE THE UNIT YOURSELF.

Check your system and accessories

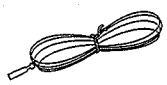
CX-ZHT540 Compact disc stereo cassette receiver
SX-ZL520 Front speakers
SX-CR677 Surround speakers
PX-E860 Turntable

Remote Control

MW/LW antenna



FM antenna



Operating Instructions, etc.

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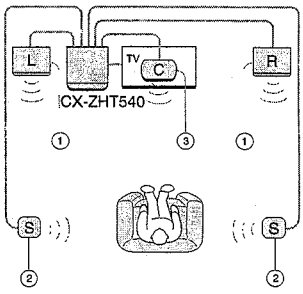
SETTING UP

The DOLBY PRO LOGIC system which is the biggest features of this stereo system provides you with multichannel sound in your home.
Complete setting and connection of the main unit, supplied speakers, your TV and video equipment according to the following procedure.

POSITIONING THE SPEAKERS

To achieve the optimum effects obtainable with the DOLBY PRO LOGIC system, it is important to position the speakers properly. Refer to the following illustration to find out the best location in your room.



① **Front speakers**
② **Surround speakers**
Place the surround speakers directly to the side of or slightly behind the listening area. Align them horizontally, about 1 meter (3.2 feet) above ear height
③ **Center speaker**
Position in the center of the two front speakers. In addition, position on or below the TV set, if connecting a TV set to the unit.

NOTE

- No sound is heard from the center and surround speakers when the DOLBY PRO LOGIC and the 5.1 CH (page 24) are set to off.
- The center speaker sounds only when the DOLBY PRO LOGIC or 5.1 CH (page 24) is set to on.

CONNECTIONS

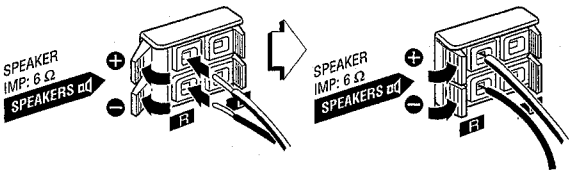
Before connecting the AC cord
The rated voltage of your unit shown on the rear panel is 230 V AC. Check that the rated voltage matches your local voltage.

IMPORTANT
Connect the speakers, antennas, and all optional equipment first. Then connect the AC cord.

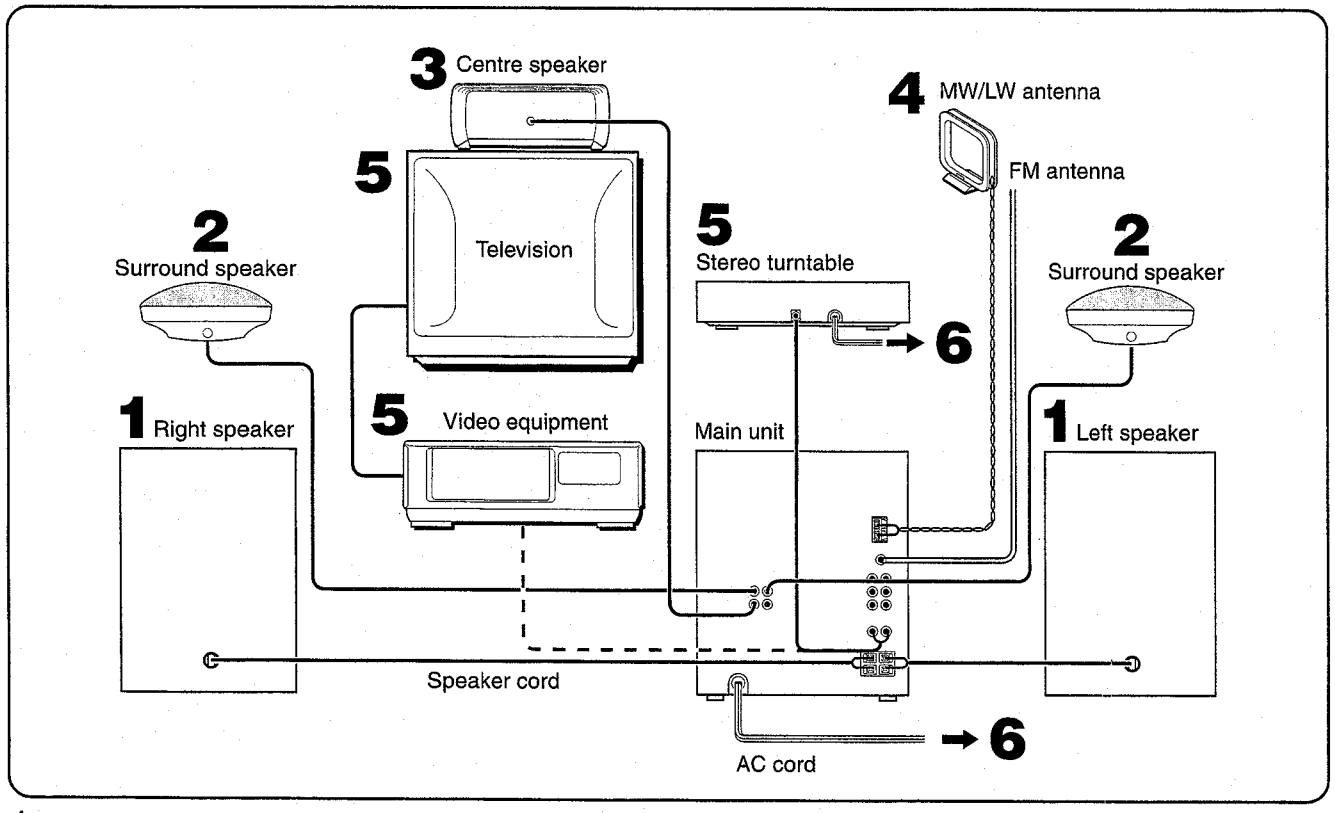
There are no differences between the front speakers as well as the surround speakers. Both speakers of its kind can be connected as L (left) or R (right).

1 Connect the right and left speaker to the main unit.

Connect the right speaker cord to **SPEAKERS R** terminals, and the left to **SPEAKERS L** terminals.

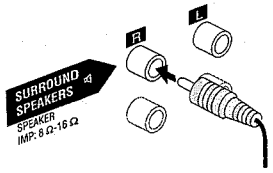


The speaker cord with white stripe should be connected to the ⊕ terminal and the other cords to the ⊖ terminal.



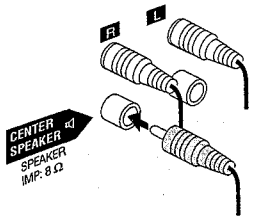
2 Connect the surround speakers to the main unit.

Connect the right surround speaker cord to the **SURROUND SPEAKERS R** terminal, and left to the **SURROUND SPEAKERS L** terminal.



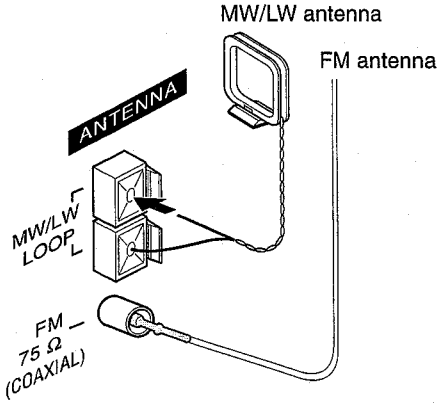
3 Connect the center speaker.

Connect the center speaker cord to **CENTER SPEAKER** terminal.



4 Connect the supplied antennas.

Connect the FM antenna to **FM 75 Ω** terminals and the MW/LW antenna to **MW/LW LOOP** terminals.



5 Connect the stereo turntable or video equipment to the main unit.

When connecting to a stereo turntable, connect the red plug to **VIDEO/AUX/PHONO IN R** jack, and the white plug to **VIDEO/AUX/PHONO IN L** jack.

When connecting to a video equipment, connect **VIDEO/AUX/PHONO IN** jacks of this unit to the audio output jacks of the video equipment with an optional audio connecting cord.

6 Connect the AC cord to an AC outlet.

- The Demo will begin when the AC cord is plugged into an AC outlet. See page 7 "DEMO" for details.

To position the antennas

FM antenna:

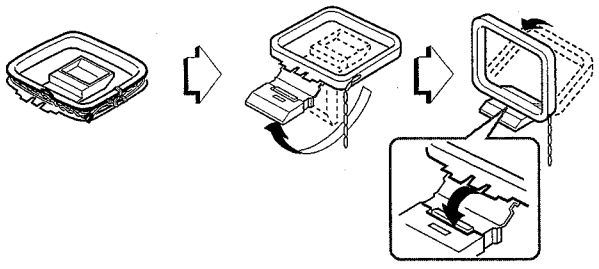
Extend fully and position for the best possible reception. The use of an outdoor antenna is recommended for better reception.

MW/LW antenna:

Position to find the best reception.

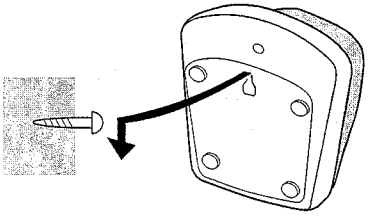
To stand the MW/LW antenna on a surface

Fix the claw to the slot.



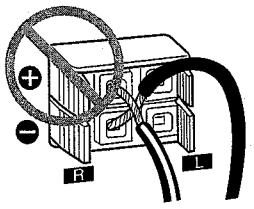
To mount the surround speaker on the wall

Mount each speaker on a spot that can hold its weight.



NOTE

- Be sure to connect the speaker cords correctly. Improper connections can cause short circuits in **SPEAKERS** terminals.

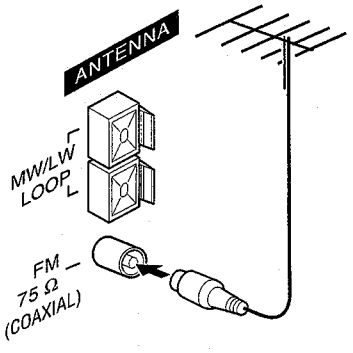


- Do not leave objects generating magnetism, such as credit cards, near the speakers, as the objects may be damaged.
- Do not bring the FM antenna near metal objects or curtain rails.
- Do not bring the MW/LW antenna near other optional equipment, the stereo system itself, the AC cord or speaker cords, since noise will be picked up.
- Do not unwind the MW/LW antenna wire.

CONNECTING AN OUTDOOR ANTENNA

For better FM reception, use of an outdoor antenna is recommended.

Connect the outdoor antenna to **FM 75 Ω** terminals.

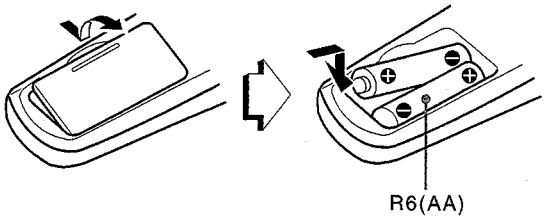


To connect other optional equipment → page 22.

REMOTE CONTROL

Inserting batteries

Detach the battery cover on the rear of the remote control and insert two R6 (size AA) batteries.



When to replace the batteries

The maximum operational distance between the remote control and the sensor on the main unit should be approximately 5 meters (16 feet). When this distance decreases, replace the batteries with new ones.

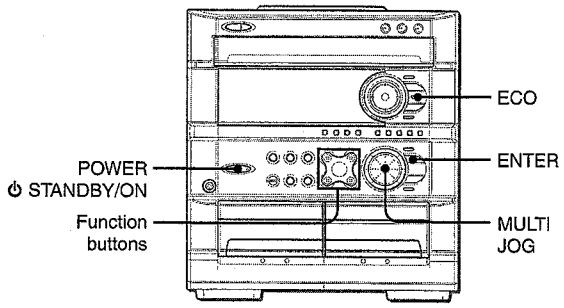
Using the remote control

The instructions in this manual refer mainly to the buttons on the main unit. Buttons on the remote control with the same names as those on the main unit can be used as well.

NOTE

- If the remote control is not going to be used for an extended period of time, remove the batteries to prevent possible electrolyte leakage.
- The remote control may not operate correctly when:
  - The line of sight between the remote control and the remote sensor inside the display window is exposed to intense light, such as direct sunlight.
  - Other remote controls are used nearby (those of a television, etc.).

BEFORE OPERATION



To turn the power on

Press one of the function buttons (**TAPE/DECK 1/2, TUNER/BAND, VIDEO/AUX/PHONO 5.1CH** or **CD**).
Playback of the inserted disc or tape begins, or the previously tuned station is received (Direct Play Function).
POWER ⏻ STANDBY/ON is also available.
When the unit is turned on, the disc compartment may open and close to reset the unit.

To turn the power off

Press **POWER ⏻ STANDBY/ON.**

Illumination guides

Whenever **POWER** or one of the function buttons is pressed, the buttons for the selected operation light up or flash.
Example: When **CLOCK** is pressed, **II SET**, ◄◄ and ►► light up as a guide to setting the current time.

To change the brightness level of the display

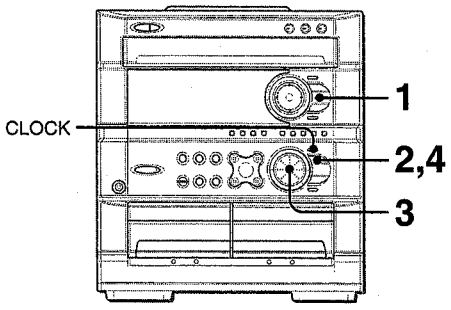
1 Press **ECO** twice so that "DIM MODE" is displayed.
2 Within 4 seconds, press **ENTER**.
3 Within 4 seconds, turn **MULTI JOG** to select the dimmer mode as below.

DIM-OFF ↔ DIMMER 1 ↔ DIMMER 2 ↔ DIMMER 3

"DIM OFF" mode is the brightest and "DIMMER 3" mode is the dimmest.
In "DIMMER 3" mode, the spectrum analyzer and the button illumination light off in addition.

4 Within 4 seconds, press **ENTER** to set the selected mode.

SETTING POWER ECONOMIZING MODE



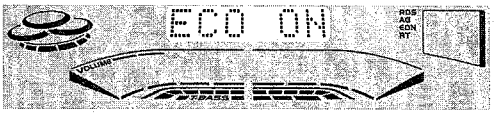
When you set power economizing mode to "ECO ON" or "ECO AUTO", the unit reduces power consumption by conducting four ECO operations as follows.

- The unit (all the illumination of the display and the buttons) blacks out when the power is turned off. Only the red indicator lights up.
  If the clock is not set, the unit does not black out. Instead, the DEMO will begin when the power is turned off.
- The illumination of the display brighten for 10 seconds only when you press a button, or turn **VOLUME** or **MULTI JOG**.
  If the display dimmer mode is set to "DIM-OFF", the brightness of the illumination does not change.
- The display dimmer mode is set to the dimmest, the button illumination lights off, and the volume is set to the minimum (0) when the unit turns on by timer recording.
- The unit automatically turns itself off if you do not use it for 10 minutes. (only when "ECO AUTO" is selected)
  The unit does not turn itself off if there is audio input signal through **VIDEO/AUX/PHONO IN** jacks when the function is VIDEO/AUX/PHONO.
  Exceptionally, the power does not turn off when 5.1 CH is selected.

1 Press ECO once.
"ECO MODE" will be displayed.

2 Press ENTER within 4 seconds.
The current power-economizing mode status will be displayed.
If the power-economizing mode is off: ECO OFF
If the power-economizing mode is on: ECO AUTO or ECO ON

3 Turn MULTI JOG within 4 seconds to switch the power-economizing mode.
Example: When "ON" is selected



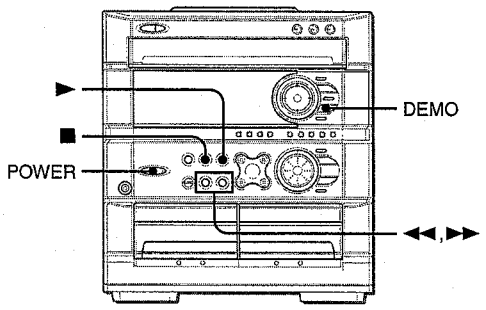
4 Press ENTER within 4 seconds to set the mode.

Standby power consumption
If the power-economizing mode is OFF: 35 W
If the power-economizing mode is ON/AUTO: 0.9 W

NOTE

To view the clock when all the display lights turn off, press **CLOCK** so that the time is displayed for 4 seconds.

DEMO (DEMONSTRATION)



When the AC cord is plugged into an AC outlet for the first time after purchase, the DEMO will begin in the display. When the power is turned on, the DEMO will end.
Until the clock is set, the DEMO will automatically begin whenever the power is turned off.

You can enjoy two kinds of DEMO modes on this unit.
One is demo, the other one is game demo.
In the demo mode, colourful illumination demonstrates on the display.
In the game demo mode, you can play a game.
See below about how to play the game.
To switch the two modes to each other, when the unit is in off mode, press **POWER** while pressing **DEMO**.

To deactivate or activate DEMO
Press **DEMO** to turn on or off the DEMO mode.

To play the game Demo

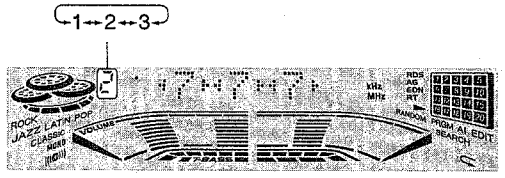
1 Press ►.
Three numbers on the display start to run.

2 Press ■ once.
The number on the left side stops.

3 Press ■ twice to stop the remaining two numbers.
Scoring:
20 points are given to start the game.
If all the numbers are equal, 50 points are added to the score.
If not equal, one point is subtracted.
If the gained points reach 9999, you win.
If the gained points fall to 0, you lose.

To reset the game DEMO, press **DEMO** twice. The game starts again.
To cancel the game DEMO, press **DEMO.**

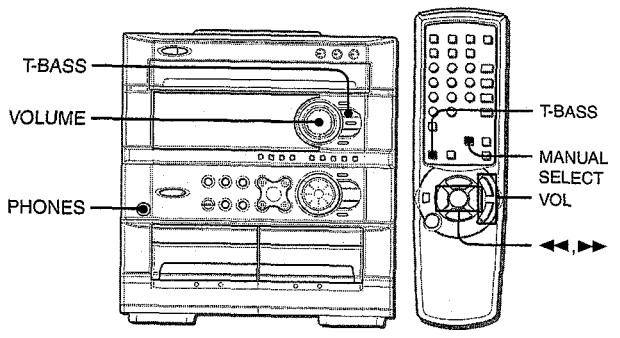
To change the probability of equalizing the three numbers
Press ◄◄ or ►► repeatedly to select one of the three probability levels when playing the game Demo. The tray number indicator in the display changes between 1 and 3. As the tray number increases from 1 to 3, the higher the probability of equalizing.



NOTE

- During the game Demo, ►, ◄◄, ►► and ■ are available only for the game Demo. Cancel the game Demo to use these buttons for the functions such as CD playing, etc.
- During the game Demo, some indicators unrelated with the actual operation light up on the display.
- During recording, DEMO is not operative.

AUDIO ADJUSTMENTS



VOLUME CONTROL

Turn VOLUME on the main unit, or press VOL ∧ or ∨ on the remote control.

The volume level is displayed as a number from 0 to MAX (50). The volume level is automatically set to 20 when the power is turned off with the volume level set to 21 or more.

To change the left/right balance

Press **MANUAL SELECT** twice on the remote control. L/R is displayed for 4 seconds. Press ◄◄ or ►► on the remote control within these 4 seconds.

- The DOLBY PRO LOGIC (page 21) and the DOLBY DIGITAL SURROUND (page 24) front speakers level is also changed.

SUPER T-BASS SYSTEM

The T-BASS system enhances the realism of low-frequency sound.

Press T-BASS.

Each time it is pressed, the level changes. Select one of the three levels, or the off position to suit your preference.

NOTE

Low-frequency sound may be distorted when the T-BASS system is used for a disc or tape in which low-frequency sound is already emphasized. In this case, cancel the T-BASS system.

Using the headphones

Connect headphones to **PHONES** jack with a stereo standard plug (ø6.3 mm, 1/4 inch).

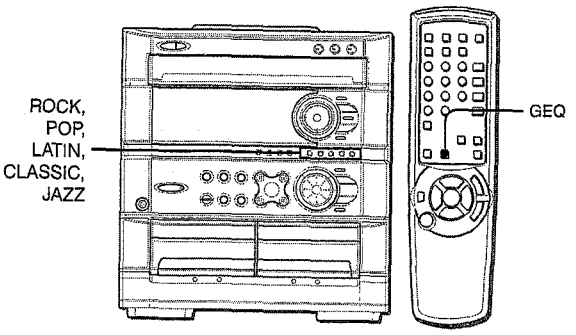
No sound is output from the speakers while the headphones are plugged in.

- When the headphones are plugged in, the DOLBY PRO LOGIC (page 21), and the 5.1CH (page 24) do not function.

Sound adjustment during recording

The output volume and tone of the speakers or headphones can be freely varied without affecting the recording.

GRAPHIC EQUALIZER



This unit provides the following 5 different equalization curves.

ROCK: Powerful sound emphasizing treble and bass
POP: More presence in the vocals and midrange
LATIN: Accented higher frequencies for latin-type music.
CLASSIC: Enriched sound with heavy bass and fine treble.
JAZZ: Suppressed vocals range appropriate for listening to rhythmical sources

Press one of the graphic equalizer preset buttons.

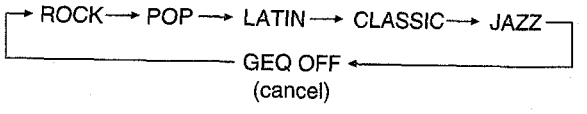
The selected mode indicator light up and that equalization mode appears for 4 seconds on the display.

To cancel the selected mode

Press the selected equalizer preset button. "GEQ OFF" is displayed and the equalization curve becomes flat.

To select with the remote control

Press **GEQ** repeatedly until the desired program mode is displayed.



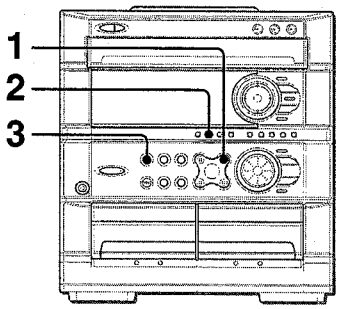
PRESETTING STATIONS

The unit can store a total of 32 preset stations. Presetting allows you to tune in to a station directly. Stations are assigned preset numbers, beginning from 1 in consecutive order for each band (FM, MW, LW).

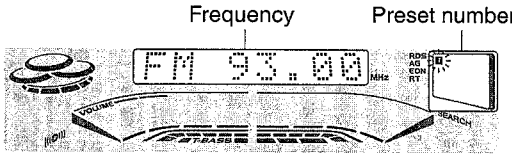
Automatic presetting:
This unit has a function for reception of *1RDS (Radio Data System) and other stations.
FM RDS stations take priority over other FM stations if there are more than 32 receivable stations.
Manual presetting:
You can select stations to be preset from all the bands.

AUTOMATIC PRESETTING

The tuner scans through the receivable frequency range and stores stations automatically.



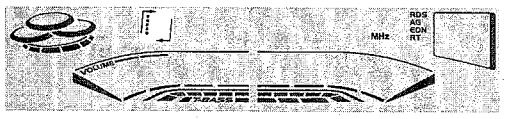
1 Press TUNER/BAND until FM is displayed.



2 Keep RT pressed for 4 seconds until AUTO PRESET scrolls on the display.

3 Press ▮▮ SET within 4 seconds.

The tuner searches for a station, beginning with the FM band. When a tuned station is stored, the selected preset number flashes on the display.

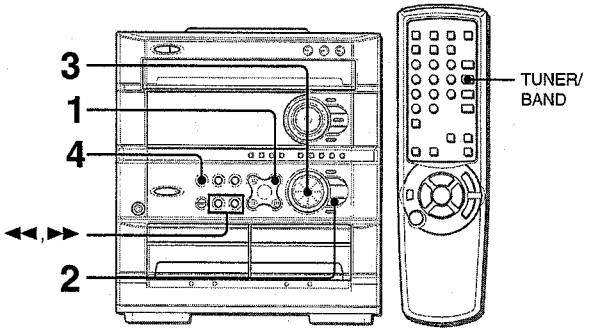


The search continues on the MW and LW bands if preset numbers are still available.
When automatic presetting has been completed, the display returns to the first preset station.

When the tuner detects *2identical RDS stations with alternative frequencies
Only the station with the stronger signal is stored.
Before storing an RDS station, the tuner checks first whether the same stations on the other frequencies are present, and stores the station with the best reception.

NOTE
When automatic presetting is done, all previously stored stations are cleared.

MANUAL PRESETTING



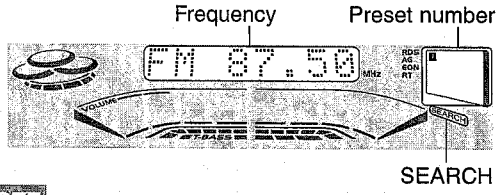
1 Press TUNER/BAND repeatedly to select the band.

When **TUNER/BAND** is pressed while the power is off, the power is turned on directly (Direct Play Function).

FM → MW → LW

2 Press TUNER PRESET repeatedly to select the manual tuning mode.

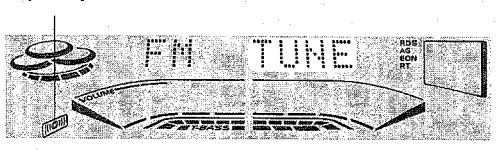
Each time the button is pressed, the following three tuning modes are selected cyclically.
① **Preset tuning mode:** The preset number flashes.
② **Auto search mode:** "SEARCH" is displayed.
③ **Manual tuning mode:** "SEARCH" is not displayed and the preset number does not flash.



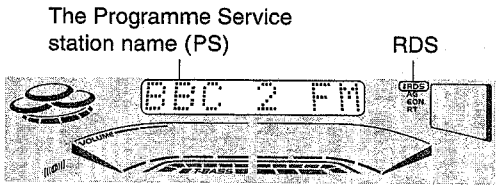
NOTE
The preset tuning mode is skipped if no station is preset.

3 Turn MULTI JOG clockwise or counter-clockwise to tune in to a station.

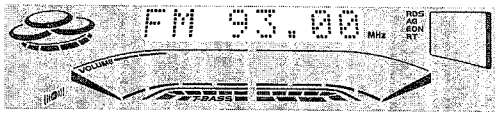
The frequency changes as you turn **MULTI JOG**. When a station is received, "TUNE" is displayed for 2 seconds.
During FM stereo reception, ((◉)) is displayed.



ⓐ When tuning in to an FM RDS station
After TUNE on the display goes out, the Programme Service station name (*3PS) is displayed and the indicator beside RDS lights up.



ⓑ When tuning in to the other stations
After TUNE on the display goes out, the band is displayed.



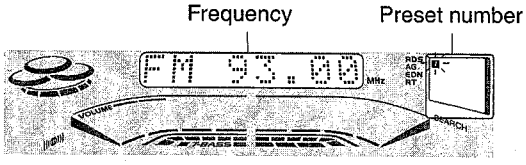
- **I◄◄DOWN** and **►►IUP** are also available to tune in to a station.

4 Press ▮▮ SET to store the stations.
The selected preset number flashes.

5 Repeat steps 1 to 4 to store the stations.
The next station will not be stored if a total of 32 preset stations for all the bands have already been stored.

NOTE

"FULL" is displayed if you attempt to store more than 32 preset stations.



*1**RDS**
Today many stations transmit so-called RDS (Radio Data System) codes that contain a variety of additional information along with the regular sound signals.

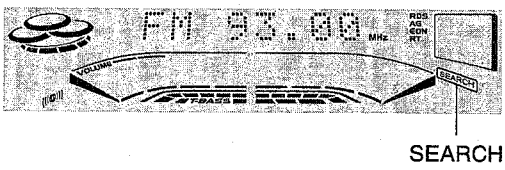
*2**Identical RDS stations with alternative frequencies (AF)**
This is a list of alternative frequencies which gives information on the various transmitters broadcasting the same program in the same reception area. It enables receivers equipped with memory to store the list, to reduce the time for switching to another transmitter.

*3**Program service station name (PS)**
This is a name consisting of not more than 8 alphanumeric characters, which is displayed in order to inform listeners what program service is being broadcasted by the radio station.
Example: BBC 1
Characters which can be displayed

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
0 1 2 3 4 5 6 7 8 9 < > ? " ' * @ – + / = [ ]

If a character transmitted by the broadcast is not applicable to receivers, a space is left instead.

To search for a station quickly (Auto Search)
Press **TUNER PRESET** repeatedly to display "SEARCH" (auto search mode), and turn **MULTI JOG** clockwise or counter-clockwise until the frequency starts to change rapidly. After tuning in to a station, the search stops.

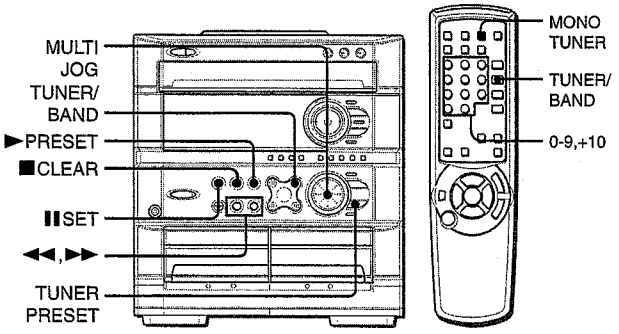


To stop the Auto Search manually, turn **MULTI JOG** a little in either direction.

- The Auto Search may not stop at stations with very weak signals.
- **◄◄ DOWN** and **►► UP** are also available to search for a station. Keep **◄◄ DOWN** or **►► UP** pressed until the tuner starts searching. Press the button to stop the search manually.

RECEPTION BY PRESET NUMBER

Use the remote control to select the preset number directly.



1 Press TUNER/BAND to select a band.

2 Press numbered buttons 0-9 and +10 to select a preset number.

Example:

To select preset number 20, press **+10**, **+10** and **0**.

To select preset number 15, press **+10** and **5**.

Selecting a preset number on the main unit

Press **TUNER/BAND** to select a band. Press **TUNER PRESET** repeatedly until the preset number flashes (preset tuning mode), and turn **MULTI JOG**. The preset numbers are selected in sequence as you turn **MULTI JOG**.

- **►PRESET** is also available to select the preset number. Each time the button is pressed, the next highest number is selected.

To clear a preset station

Select the preset number of the station to be cleared. Then, press **■CLEAR**, and press **❚❚SET** within 4 seconds.

The preset numbers of all stations in the band with higher numbers are also decreased by one.

To tune in to a station which is not preset

Press **TUNER/BAND** to select a band, and press **◄◄ DOWN** or **►► UP** to select the station.

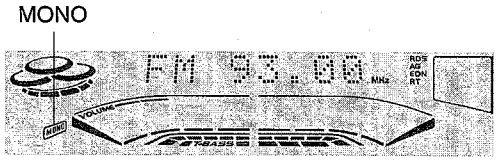
To play a tuned station when the power is off (Direct Play Function)

Press **TUNER/BAND**. The power is turned on and the tuned station is played.

When a FM stereo broadcast contains noise

Press **MONO TUNER** on the remote contro so that "MONO" appears on the display.

Noise is reduced, although reception is monaural.



To restore stereo reception, press **MONO TUNER** on the remote control so that "MONO" disappears and "STEREO" is displayed for 2 seconds.

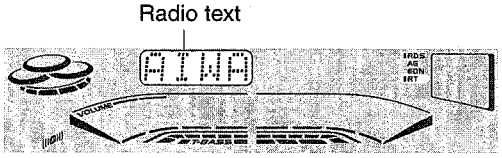
NOTE

RDS functions may not work correctly if the RDS transmission data from the station contains too much interference or the reception signal is too weak.

To display radio text (*4RT) during RDS reception

When the tuned station is transmitting RT codes, text scrolls on the display when **RT** is pressed.

If the tuned station is not transmitting RT codes, "NO RT" is displayed when **RT** is pressed.



To return to the normal display, press **RT** again.

***4Radiotext (RT)**
Information such as the cast list of a play or the title of a song is shown on the display.

***5Program type identification (PTY)**
PTY allows selection of listening by one of 15 or more program types rather than by a station.

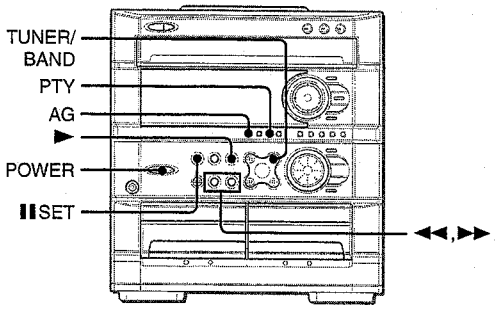
***6Enhanced other networks information (EON)**
EON information gives the receiver a cross reference to other stations and allows the receiver to switch from the currently tuned station to another RDS station.

***7Traffic program identification (TP)**
This is a code which informs the receiver that a tuned station regularly broadcasts traffic information.

***8Clock-time (CT)**
CT function provides an accurate clock signal which is self adjusting to time zones and seasonal time changes.

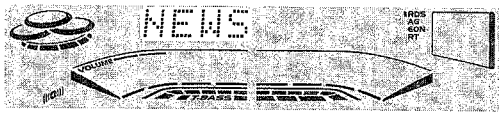
SEARCHING WITH THE HELP OF RDS CODES

Each RDS station identifies the type of program (*5PTY) which it is currently broadcasting. If you specify a PTY, the unit can automatically detect a suitable station from the preset stations. In addition, the *6EON (Enhanced Other Networks) service works in some areas, so that searching is made much faster.



TO DISPLAY THE PTY

Press PTY once during RDS reception.



Programmes are classified as follows:

TRAFFIC, NEWS, AFFAIRS (current affairs), INFO (information), SPORT, EDUCATE (education), DRAMA, CULTURE, SCIENCE, VARIED, POP M (pop music), ROCK M (rock music), EASY M (middle of the road music), LIGHT M (light classical), CLASSICS (serious classical), OTHER M (other music), WEATHER, FINANCE, CHILDREN (Children's programmes), SOCIAL (Social Affairs), RELIGION, PHONE IN, TRAVEL, LEISURE, JAZZ (Jazz Music), COUNTRY (Country Music), NATION M (National Music), OLDIES (Oldies Music), FOLK M (Folk Music), DOCUMENT (Documentary), TEST (Alarm Test), ALARM

NOTE

- If programme type information is not being transmitted, "NO PTY" is displayed.
- If undefined programme type information is being transmitted, "UNDEFINE" is displayed.
- The unit identifies TRAFFIC with one of the programme types.

TO SEARCH FOR A SPECIFIED PTY

1 **Press PTY.**
The programme type of the currently tuned station is displayed.

2 **Within 4 seconds, press ◄◄ or ►► to select a programme type.**

3 **Within 4 seconds, press PTY again.**
The search automatically checks every preset station. After identifying a suitable station, the station will be selected.

When a station is not found
"NOT FOUND" is displayed and the unit returns to the previous station.

When the TRAFFIC programme type is selected
The unit searches for a station transmitting a *7TP code. However, the tuned station may not be broadcasting a traffic announcement currently. Wait for a while. The tuned station broadcasts traffic information regularly and a traffic announcement will be made.

EON SEARCH

When EON service works to transmit PTY, a suitable station is detected without checking every preset station. When a station transmits EON information, it takes about 15 to 30 seconds for the unit to decode the EON information. After decoding the information, the indicator beside EON lights up.
With EON search, during FM RDS reception, the unit switches to radio programmes with the specified PTY automatically as soon as they begin.

1 **Press PTY.**
The programme type of the currently tuned station is displayed.

2 **Within 4 seconds, press ◄◄ or ►► to select a programme type.**

3 **Within 4 seconds, press II SET.**
"EON ON" is displayed for 3 seconds. Then, the indicator beside EON starts flashing and the unit enters EON search standby mode.
When radio programme with the specified PTY in another radio station begins, it interrupts the currently playing radio programme and the radio programme with the specified PTY is heard. At this time, the indicator beside EON flashed rapidly. At the end of the radio programme with the specified PTY, the previous FM radio station is restored.
- EON search standby mode is stored until it is cancelled even when the power is turned off.

To check the selected EON PTY
Press and hold down **PTY** for about 4 seconds. The specified PTY and "EON PTY" are displayed alternately.

To restore the previous FM station during reception of the radio programme with the specified PTY
Press ►. At this time, EON search standby mode is cancelled.
- If ■ **CLEAR** is pressed, the previous FM station is not restored although the EON search standby mode is cancelled. Instead, it stays tuned to the current FM station.

To cancel EON PTY search standby mode
Keep **PTY** pressed. (Do not release **PTY** yet.) "EON PTY" and the specified PTY are displayed alternately. At this time, press **II SET** while pressing **PTY**. "EON oFF" is displayed and EON search standby mode is cancelled.

NOTE

The EON search functions does not work when:
- No FM stations are preset.
- The signals of the stations with the specified PTY are weak.
- FM RDS is not received.

OTHER FUNCTION OF RDS CODES

Auto GEQ function
The equalization curve is switched automatically to match the music program type of an RDS station.

Press AG.
The indicator beside AG lights up.
To cancel, press it again.

GEQ matching PTY:

PTY	GEQ
POP M	POP
ROCK M	ROCK
LIGHT M	JAZZ
CLASSICS	CLASSIC
JAZZ	JAZZ
COUNTRY	POP
NATION M	POP
OLDIES	POP
FOLK M	JAZZ
Others	off

The selected GEQ can be changed to suit your preference by pressing the GEQ buttons. During this time, the Auto GEQ function is cancelled.

Clock-time (*[8]CT)
You can automatically set and update the clock on the hour every hour just by tuning in an RDS station since RDS stations transmit clock signals.

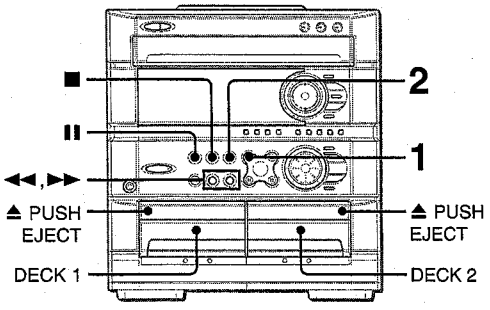
1 Press **RT** repeatedly to select "CT ON" while the unit is on and the time is displayed (see "Setting the clock").
2 Tune in an RDS station.

To deactivate CT function (If the clock is set wrongly due to an incorrect clock signal)
Repeat step 1 to select "CT OFF".

To change the MW tuning interval
The default setting of the MW tuning interval is 9 kHz/step. If you use this unit in an area where the frequency allocation system is 10 kHz/step, change the tuning interval.
Press **POWER** while pressing **TUNER/BAND** on the main unit.
To reset the interval, repeat this procedure.

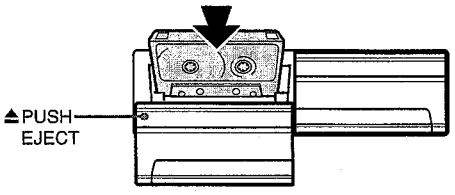
NOTE
When the MW tuning interval is changed, all preset stations are cleared. The preset stations have to be set again.

BASIC OPERATIONS



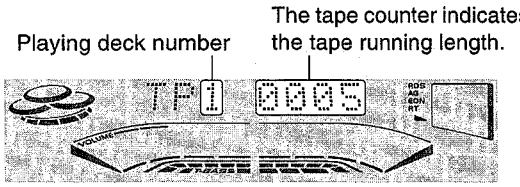
This unit is designed for optimal playback of Type I (normal) tapes.

1 Press TAPE/DECK 1/2, then press ⏏PUSH EJECT to open the cassette holder.



Insert a tape with the exposed side down. Push the cassette holder to close.

2 Press ▶ to start play.
Only the side facing out from the unit can be played back.



To select a playing deck
When tapes are loaded in both decks, press **TAPE/DECK 1/2** first to select a deck.
The selected deck number is displayed.

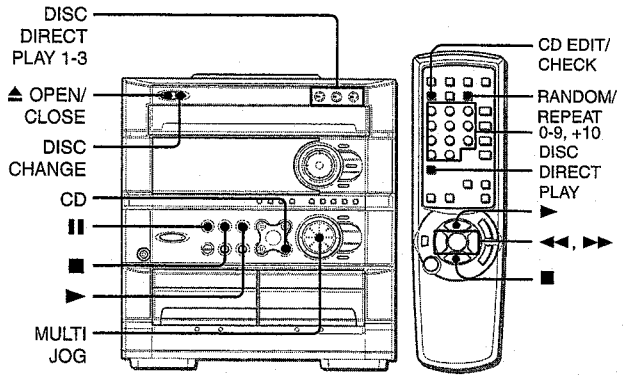
To stop play, press ■.
To pause play (Deck 2 only), press **II**. To resume play, press again.
To fast forward or rewind, press ◀◀ or ▶▶.
Then press ■ to stop the tape.

To start play when the power is off (Direct Play Function)
Press **TAPE/DECK 1/2.** The power is turned on and play of the inserted tape begins.

To set the tape counter to "0000".
Press ■ **CLEAR** in stop mode.
The counter is also set to "0000" when the cassette holder is opened.

When tapes are loaded in both decks
After playback on deck 1 finishes, the tape in the deck 2 will start to play without interruption and will stop at the end of the tape. (Continuous play)

BASIC OPERATIONS



LOADING DISCS

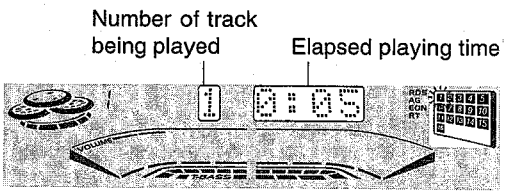
Press CD, then press ▲OPEN/CLOSE to open the disc compartment. Load disc(s) with the label side up.

To load one or two discs, place the disc(s) on tray 1 and 2.
To load three discs, press **DISC CHANGE** to rotate the trays after placing two discs. Place the third disc on empty tray 3.
Close the disc compartment by pressing **▲OPEN/CLOSE**.

PLAYING DISCS

Load discs.

To play all discs in the disc compartment, press ►.
All discs are played once.



To play one disc only, press DISC DIRECT PLAY 1-3.
The selected disc is played once.

To play with the remote control
Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.

To stop play, press ■.
To pause play, press **II**. To resume play, press again.
To search for a particular point during playback, keep ◄◄ or ►► pressed and release the button at the desired point.
To skip to the beginning of a track during playback, turn **MULTI JOG** or press ◄◄ or ►► repeatedly.
To remove discs, press **▲OPEN/CLOSE**.

To start play when the power is off (Direct Play Function)
Press **CD**. The power turns on and play of the loaded disc(s) begins.
When **▲OPEN/CLOSE** is pressed, the power is also turned on and the disc compartment is opened.

To check the remaining time
During play (except random play or programmed play), press **CD EDIT/CHECK** on the remote control. The amount of time remaining until all tracks finish playing is displayed. To restore the playing time display, repeat the above.

Selecting a track with the remote control
1 Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.
2 Press numbered buttons **0-9** and **+10** to select a track.
Example:
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.
The selected track starts to play and continues to the end of that disc.

Replacing discs during play
While one disc is playing, the other discs can be replaced without interrupting play.
1 Press **DISC CHANGE**.
2 Remove the discs and replace with other discs.
3 Press **▲OPEN/CLOSE** to close the disc compartment.

NOTE

- While the disc compartment is opened with **DISC CHANGE**, do not press buttons other than **DISC CHANGE** or **▲ OPEN/ CLOSE**. Doing so may cause malfunctions. In this case, reset the unit referring "To reset" on page 25.
- When loading an 8-cm (3-inch) disc, make sure to place it onto the inner circle of the tray precisely.
- Do not place more than one compact disc on one disc tray.
- Do not tilt the unit with discs loaded. Doing so may cause malfunctions.
- When transporting the unit, remove the discs from the trays.
- Do not use irregular shape CDs (example: heart-shaped, octagonal ones). It may result in malfunctions.
- The unit may not play a CD-R/RW disc that is recorded on personal computers or some kinds of CD-R/RW recorders because of differences in recording platforms.
- Do not attach any seal or label to either side (the recordable side or the labeled side) of a CD-R/RW disc. It may cause malfunction.

RANDOM/REPEAT PLAY

Use the remote control.

RANDOM PLAY
All the tracks on the selected disc or all the discs can be played randomly.

REPEAT PLAY
A single disc or all the discs can be played repeatedly.

Press RANDOM/REPEAT on the remote control.
Each time it is pressed, the function can be selected cyclically.
RANDOM play — RANDOM lights up on the display.
REPEAT play — ↻ lights up on the display.
RANDOM/REPEAT play — RANDOM and ↻ light up on the display.
Cancel — RANDOM and ↻ disappear from the display.

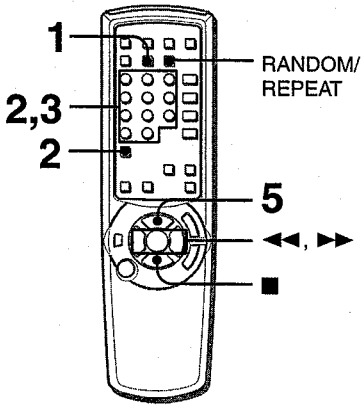
To play all discs, press ► to start play.
To play a single disc, press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to start play.

NOTE

During random play it is not possible to skip to the previously played track with ◄◄.

PROGRAMMED PLAY

Up to 30 tracks can be programmed from any of the inserted discs.

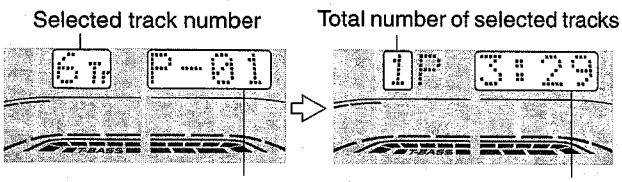


Use the remote control.

1 Press PRGM in stop mode.
"– –" and "PRGM" appear on the display.

2 Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc.
Go to the next step when the tray stops rotating.

3 Press numbered buttons 0-9 and +10 to program a track.
Example:
To select the 25th track, press **+10**, **+10** and **5**.
To select the 10th track, press **+10** and **0**.



4 Repeat steps 2 and 3 to program other tracks.

5 Press ► to start play.

To check the program
Each time ◄◄ or ►► is pressed in stop mode, a disc number, track number, and program number will be displayed.

To clear the program
Press ■**CLEAR** in stop mode.

To add tracks to the program
Repeat steps 2 and 3 in stop mode. The track will be programmed after the last track.

To change the programmed tracks
Clear the program and repeat all the steps again.

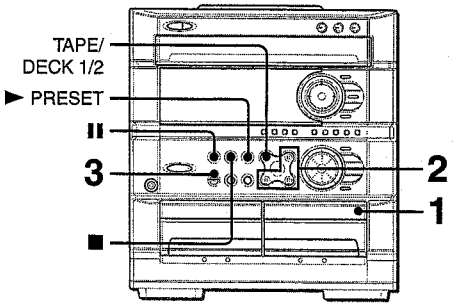
To play the programmed tracks repeatedly
After programming the tracks, press **RANDOM/REPEAT** repeatedly until ⮌ appears on the display.

NOTE

- During programmed play, you can not use random play, check the remaining time or select a track. "Can't USE" is displayed if you attempt to select a track.
- "FULL" is displayed if you attempt to program more than 30 tracks.

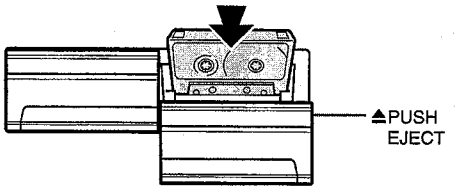
BASIC RECORDING

This section explains how to record from the tuner, CD player, or external equipment.



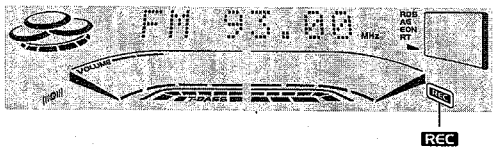
Preparation
- Use Type I (normal) tapes only.
- Set the tape to the point where recording will start.
- Note that recording is done on only one side of the tape.

1 Insert the tape to be recorded on into Deck 2.
Insert the tape with the side to be recorded on first facing out from the unit.



2 Press one of the function buttons and prepare the source to be recorded.
To record from a CD, press **CD** and load the disc(s).
To record from a radio broadcast, press **TUNER/BAND** and tune in to a station.
To record from the connected source, press **VIDEO/AUX/PHONO 5.1 CH** and play.

3 Press ●REC/REC MUTE to start recording.
When recording from a connected source, start playback of the source.



When the selected function is CD, playback and recording start simultaneously.

To stop recording, press ■.
To pause recording, press II. (Applicable when the recording source is TUNER or VIDEO/AUX/PHONO.)
To resume recording, press it again.

Sound adjustment during recording
The output volume and tone of the speakers or headphones are freely varied without affecting the recording.

To erase a recording
A previous recording is erased when a new recording is made on that part of that tape.
1 Insert the tape to be erased into Deck 2 and press **TAPE/DECK 1/2** to display "TP2".
2 Wind up the tape to the point where the erasure is to be started.
3 Press ●**REC/REC MUTE** to start the erasure.

NOTE

- "Can't REC" is displayed if you attempt to record on a tape with the plastic tabs broken off.
- When recording on tape, close the disc compartment before starting to record.
- When recording an externally connected source via the VIDEO/AUX/PHONO IN jacks, the small dot on the right side lights up continuously in the display if the input level is too high. In this case, stop recording and adjust the input level until the dot lights intermittenly (page 23).
- If squealing or beating sounds occur when recording MW or LW broadcast, press **MONO TUNER** on the remote control to select "BEAT 1" or "BEAT 2", so as to eliminate the noise. When "BEAT 1" is selected, the dot light is turned on in the display window.

INSERTING BLANK SPACES

4-second blank spaces can be inserted at the desired point during recording. (Applicable when the source is TUNER or VIDEO/AUX/PHONO.)

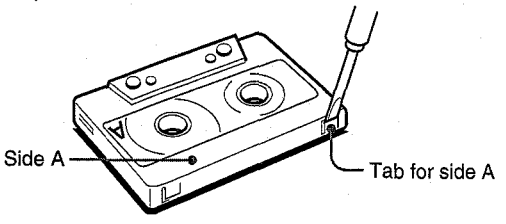
1 **Press ●REC/REC MUTE during recording or while in recording pause mode.**
REC on the display flashes for 4 seconds and a 4-second blank space is made. Then, the deck enters the recording pause mode.

2 **Press ▮▮ to resume recording.**

To insert a blank space of less than 4 seconds, press **●REC/REC MUTE** again while REC is flashing.
To insert blank spaces of more than 4 seconds, after the deck enters recording pause mode, press **●REC/REC MUTE** again. Each time the button is pressed, a 4-second blank space is added.

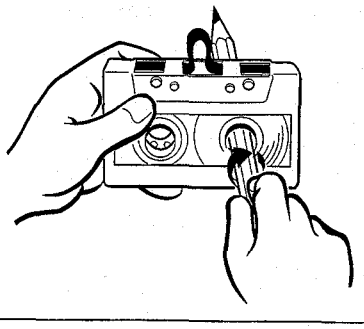
About cassette tapes

- **To prevent accidental erasure**, break off the plastic tabs on the cassette tape after recording with a screwdriver or other pointed tool.

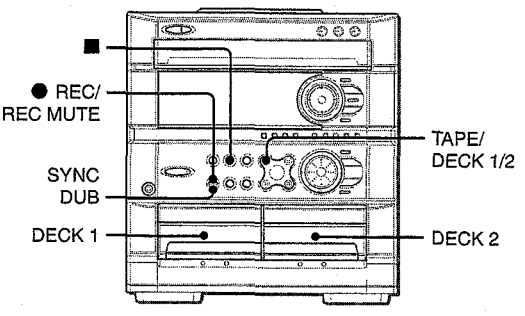


To record on the tape again, cover the tab openings with adhesive tape, etc.

- **120-minute or longer tapes** are extremely thin and easily deformed or damaged. They are not recommended.
- **Take up any slack in** the tape with a pencil or similar tool before use. Slack tape may break or jam in the mechanism.



DUBBING A TAPE MANUALLY



Preparation

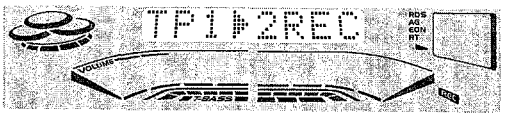
- Set the tape to the point where recording will start.
- Note that recording will be done on one side of the tape only.

1 **Press TAPE/DECK 1/2.**

2 **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert the tapes with the sides to be played back or recorded on first facing out from the unit.

3 **Press TAPE/DECK 1/2 to select Deck 1.**
"TP1" is displayed.

4 **Press ●REC/REC MUTE to start recording.**
Playing and recording start simultaneously.



To stop dubbing
Press ■.

DUBBING THE WHOLE TAPE

This function allows you to make exact copies of both sides of the original tape.

NOTE

- Dubbing does not start from a point halfway in the tape.
- Note that recording will be done on one side of the tape only.

1 **Press TAPE/DECK 1/2.**

2 **Insert the original tape into Deck 1 and the tape to be recorded on into Deck 2.**
Insert each tape with the side to be played back or recorded on first facing out from the unit.

3 **Press SYNC DUB to start recording.**
"DUBBING" appears on the display.

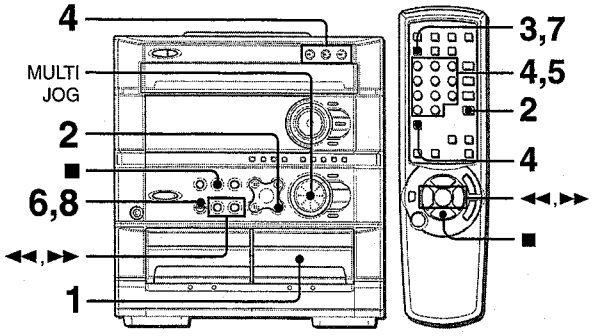
The tapes are rewound to the beginning of the front sides, and recording starts.

To stop dubbing
Press ■.

NOTE

Recording does not start if the erasure prevention tab for the side of the tape facing out from the unit is broken off.

AI EDIT RECORDING



The AI edit recording function enables CD recording without worrying about tape length and track length. When a CD is inserted, the unit automatically calculates the total track lengths. If necessary, the order of tracks is rearranged so that no track is cut short.
(AI: Artificial Intelligence)

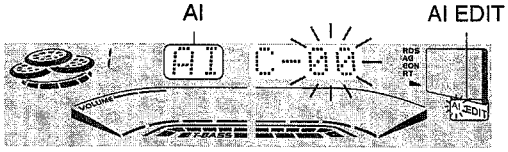
NOTE

The AI edit recording will not start from a point halfway into the tape. The tape must be recorded from the beginning of either side.

***1* Insert the tape into Deck 2.**
Insert the tape with the side to be recorded on first facing out from the unit.

***2* Press CD and load the disc(s).**

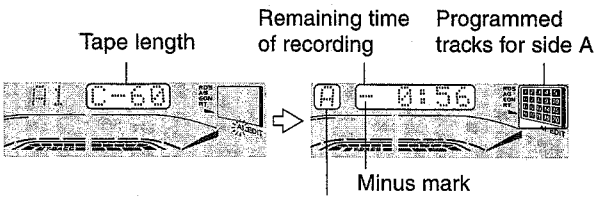
***3* Press CD EDIT/CHECK once on the remote control.**
"AI" and "AI EDIT" are displayed.



If "PRGM" is displayed, press **CD EDIT/CHECK** again.

***4* Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc.**

***5* Press numbered buttons 0-9 on the remote control to designate the tape length.**
10 to 99 minutes can be specified.
Example: When using a 60-minute tape, press **6** and **0**.
In a few seconds, the tracks to be recorded on each side of the tape are determined.
• ◀◀ and ▶▶ or **MULTI JOG** are also available to designate the tape length.



***6* Press ●REC/REC MUTE to start recording on the first side.**
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When the last track programmed for side A is finished, deck 2 enters the recording stop mode. After entering the recording stop mode, go to step 7.

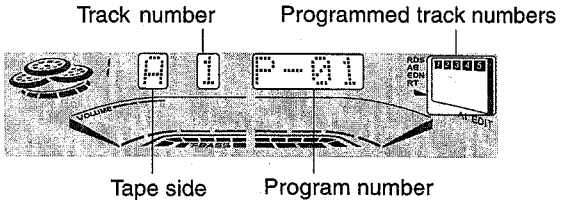
***7* Press CD EDIT/CHECK on the remote control to display the program for the second recording.**
"B" is displayed.

***8* Turn over the tape in Deck 2 and press ●REC/REC MUTE to start recording on the second side.**

To stop recording
Press ■.
Recording and CD play stop simultaneously.

To clear the edit program
Press ■ **CLEAR** twice in stop mode so that "EDIT" disappears on the display.

To check the order of the programmed track numbers
Before recording, press **CD EDIT/CHECK** on the remote control to select side A or B, and press ◀◀ or ▶▶ repeatedly or turn **MULTI JOG**.



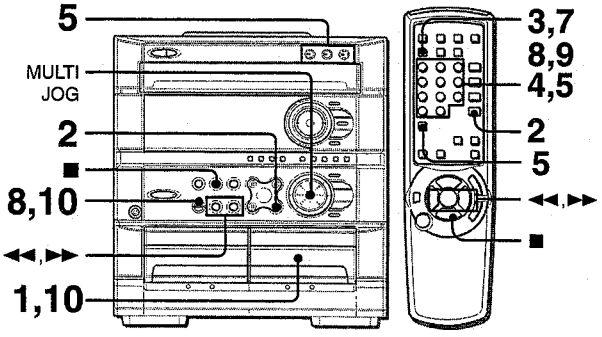
To add tracks from other discs to the edit program
If there is any time remaining on the tape after step 5, you can add tracks from other discs in the CD compartment.
1 Press **CD EDIT/CHECK** on the remote control to select side A or B.
2 Press **DISC DIRECT PLAY**, then press one of the numbered buttons **1-3** within 3 seconds to select a disc.
3 Press numbered buttons **0-9** and **+10** on the remote control to select tracks.
A track whose playing time is longer than the remaining time cannot be programmed.
4 Repeat steps 2 and 3 to add more tracks.

Time on cassette tapes and editing time
The actual cassette recording time is usually a little longer than the specified recording time printed on the label. This unit can program tracks to use the extra time. When the total recording time is a little longer than the tape's specified recording time after editing, the display shows the extra time (without a minus mark), instead of the time remaining on the tape (with the minus mark).

NOTE

• The AI edit recording function cannot be used with discs containing 31 tracks or more. "TR OVER" is displayed if this is attempted.
• Recording is inhibited if the erasure prevention tab on either side of the tape facing out from the unit is broken off.

PROGRAMMED EDIT RECORDING



In the programmed edit recording function, the tracks can be programmed while checking the remaining time on each side of the tape as the tracks are programmed.

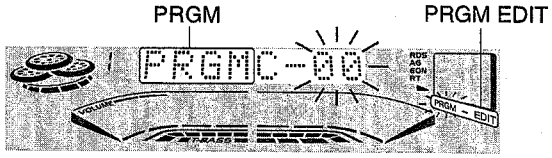
NOTE

The programmed edit recording will not start from a point halfway in the tape. The tape must be recorded on from the beginning of either side.

1 **Insert the tape into Deck 2.**
Insert the tape with the side to be recorded on first facing out from the unit.

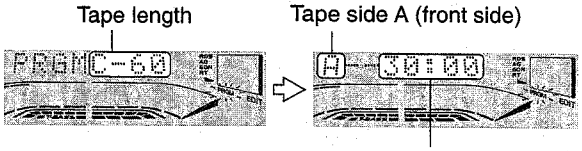
2 **Press CD and load the disc(s).**

3 **Press CD EDIT/CHECK <u>twice</u> on the remote control.**
"PRGM EDIT" and "PRGM" are displayed.



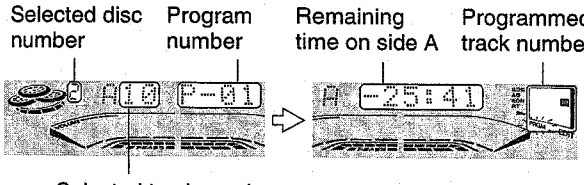
If "AI" is displayed, press **CD EDIT/CHECK** again.

4 **Press numbered buttons 0-9 on the remote control to designate the tape length.**
10 to 99 minutes can be specified.
- ◀◀ , ▶▶ or **MULTI JOG** are also available to designate the tape length.



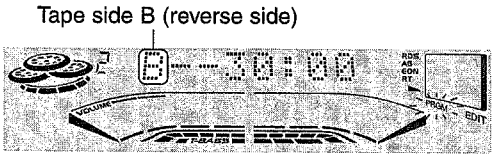
Maximum recording time for side A

5 **Press DISC DIRECT PLAY, then press one of the numbered buttons 1-3 within 3 seconds to select a disc.**
Then, press numbered buttons 0-9 and +10 on the remote control to program a track.
Example: To select the 10th track of disc 2, press **DISC DIRECT PLAY 2,** then **+10** and **0.**



6 **Repeat step 5 for the rest of the tracks for side A.**
A track whose playing time is longer than the remaining time cannot be programmed.

7 **Press CD EDIT/CHECK on the remote control to select side B and program the tracks for side B.**
After confirming B on the display, repeat step 5.



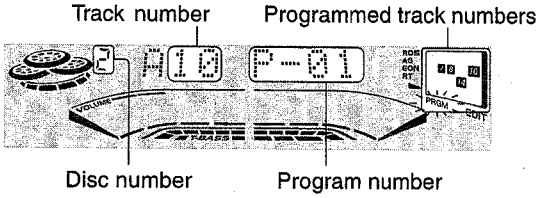
8 **Press CD EDIT/CHECK on the remote control to select side A and press ●REC/REC MUTE to start recording.**
The tape is rewound to the beginning of the front side, the lead segment is played through for 10 seconds, and recording starts. When the last track programmed for side A is finished, deck 2 enters the recording stop mode. After entering the recording stop mode, go to step 9.

9 **Press CD EDIT/CHECK on the remote control for recording of the second side.**
"B" is displayed.

10 **Turn over the tape in Deck 2 and press ●REC/REC MUTE to start recording.**
Recording starts.

To stop recording
Press ■. Recording and CD play stop simultaneously.

To check the order of the programmed track numbers
Before recording, press **CD EDIT/CHECK** on the remote control to select side A or B, and press ◀◀ or ▶▶ repeatedly.



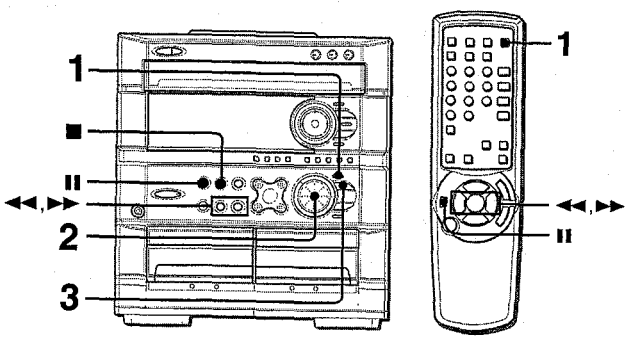
To change the program of each side
Press **CD EDIT/CHECK** on the remote control to select side A or B, and press **■CLEAR** to clear the program on the selected side. Then program tracks again.

To clear the edit program
Press **■CLEAR** twice in stop mode so that "EDIT" disappears on the display.

NOTE

- Recording is inhibited if the erasure prevention tab on either side of the tape facing out from the unit is broken off.
- Up to 30 tracks can be programmed from any of the inserted discs.
- "FULL" is displayed if you attempt to program more than 30 tracks.

SETTING THE CLOCK



When the clock is set, the ":" between the hours and minutes flashes. When the power cord is plugged into an AC outlet for the first time after purchase or when the clock setting is canceled due to a power failure, the entire clock display flashes.

1 **Press CLOCK.**
"AM 12:00" will be displayed.

2 **Within 4 seconds, turn MULTI JOG to designate the hour and the minute.**
Turning **MULTI JOG** changes both the hour and the minute. ◄◄ or ►► is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.

3 **Press ENTER or II.**
The clock starts from 00 seconds.

To view the clock when in another display
Press **CLOCK**. The time is displayed for 4 seconds and then the original display reappears. However, the clock cannot be displayed during recording.

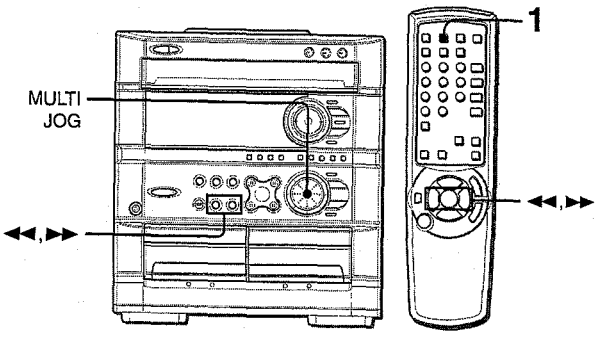
To switch to the 24-hour standard
Press **CLOCK** and then press ■ within 4 seconds.
Repeat the same procedure to restore the 12-hour standard.

If the clock display flashes
If the display flashes when the clock is displayed, it indicates that the clock has stopped due to a power failure or the removal of the power cord. The current time needs to be reset.

NOTE

If the power-economizing mode (page 7) is on, all the display lights turn off when the power is turned off. To view the clock, press **CLOCK** so that the time is displayed for 4 seconds.

SETTING THE SLEEP TIMER



The unit can be turned off automatically at a specified time.

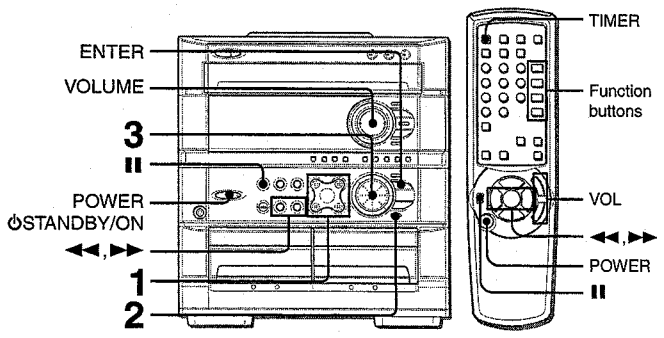
1 **Press SLEEP on the remote control.**
"SLEEP" appears on the display.

2 **Within 4 seconds, turn MULTI JOG or press ◄◄ or ►► to specify the time until the power is turned off.**
The time changes between 5 to 240 minutes in 5-minute steps.

To check the time remaining until the power turns off
Press **SLEEP** once. The remaining time is displayed for 4 seconds.

To cancel the sleep timer
Press **SLEEP** twice so that "SLEEPoFF" appears on the display.

SETTING THE TIMER



The unit can be turned on at a specified time every day with the built-in timer.

Preparation
Make sure the clock is set correctly.

***1* Press one of the function buttons to select a source.**

***2* Press TIMER to display ◷ and "⏍ PLAY".**
Time and audio source name flash alternately.

***3* Within 6 seconds, turn MULTI JOG to designate the timer-on time, then press ENTER or II.**
Turning **MULTI JOG** changes both the hour and the minute.
- ◀◀ or ▶▶ is also available instead of **MULTI JOG**. Holding these buttons down will vary the time rapidly.

***4* Within 4 seconds, turn MULTI JOG to select the duration for the timer-activated period.**
The duration can be set between 5 and 240 minutes in 5-minute steps.
- ◀◀ or ▶▶ is also available instead of **MULTI JOG**.

The duration will be automatically set after 4 seconds. It will also be set if **ENTER** or **II** is pressed within 4 seconds after step 4.

***5* Adjust the volume.**
The source sound will play at the volume level set in this step when the power is turned on by the timer.
If the volume level is set to 21 or higher, however, it will automatically be set to 20 when the power is turned on.

***6* Prepare the source.**
To listen to a CD, load the disc to be played first on tray 1.
To listen to a tape, insert the tape into Deck 1 or 2.
To listen to the radio, tune in to a station.

***7* Press POWER⏻STANDBY/ON to turn off the power.**
◷ remains on the display after the power is turned off (timer standby mode), if the power-economizing mode is OFF.

When the timer-on time is reached, the unit turns on and begins play with the selected source.

NOTE
- You can change the source that was selected in step 1 by pressing one of the function buttons before pressing **ENTER** or **II** in step 3.
- If the power-economizing mode is ON, ◷ is not displayed in the timer standby mode.

To check the timer setting
Press **TIMER**.
The selected source, the timer-on time, and the duration for the timer-activated period will be displayed for 6 seconds.

To change any of the previous setting
Carry out from step 1.
However, if you do not change the timer-on time, in step 3 just press **ENTER** twice and continue from step 4.

To cancel the timer standby mode temporarily
Press **TIMER** repeatedly until ◷ disappears and "⏍OFF" is displayed.
To restore the timer standby mode, press **TIMER** once or twice to display ◷ or ⏺◷.

Using the unit while the timer is set
You can use the unit normally after setting the timer.
Before turning off the power, carry out step 5 and 6.

NOTE
- Timer playback and timer recording will not begin unless the power is turned off.
- Connected equipment cannot be turned on and off by the built-in timer of this unit. Use an external timer.

TIMER RECORDING

Timer recording is applicable for TUNER and VIDEO/AUX/PHONO (with an external timer) sources only.

Press either **TUNER/BAND** or **VIDEO/AUX/PHONO 5.1 CH** to select a source, then **press TIMER repeatedly until ⏺◷ appears on the display**. Within 6 seconds, carry out the steps of "SETTING THE TIMER" from step 3 and insert the tape to be recorded on into deck 2 after step 6.

NOTE
- When the power-economizing mode (page 7) has been turned on, the timer recording volume level will be 0 (minimum level).
- You cannot use the timer function to record from a CD or tape.

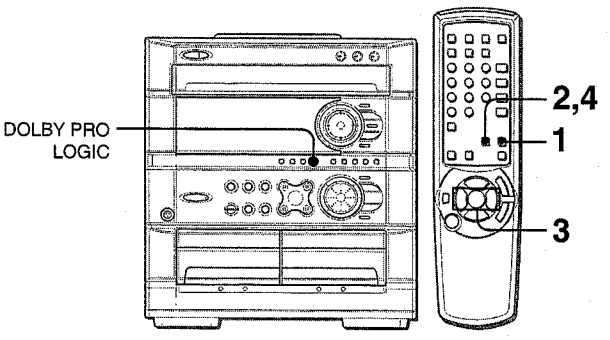
DOLBY PRO LOGIC

The DOLBY PRO LOGIC feature with the center and rear speakers (standard) assure full-scale home theater sound. When playing back laser discs or video software that have been recorded in Dolby Surround, astonishingly realistic sound surrounds the listener to create a new level of audio/visual entertainment.
Independent control of the five sound channels allows the listener to enjoy the same type of sound reproduction experienced in movie theaters. Voices are reproduced in the front and center sound field, while ambient sounds like cars and crowds are reproduced on all sides of the listener for an incredibly lifelike audio/video experience. Please read the following carefully to "tune" the system's output to match the characteristics of your listening space.

Check the following:

- **Before using the Dolby Pro Logic, adjust the proper balance of speaker sound levels.**
- Make sure the supplied speakers are properly connected and positioned. (See page 4)
- Make sure the TV set and video unit are properly connected. (See page 4)
- Make sure the laser disc, video tape, etc., support DOLBY SURROUND.

ADJUSTING SPEAKER LEVEL BALANCE



The unit is equipped with a built-in test signal generator called a noise sequencer for easy balance adjustment of all five channels. The sequencer outputs a noise signal that "travels" from channel to channel, enabling the simple adjustment of sound level to achieve, at the listening position, the same apparent loudness from each channel.

About the channels

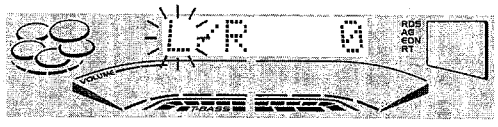
The left and right front speakers create the stereo effect.
The center speaker helps achieve precise sound positioning over a broad sound field.
The rear-mounted surround speakers enhance the "depth" of the sound field.

Use the remote control.

1 Press DOLBY PRO LOGIC to select NORMAL.

"NORMAL" is displayed.
If "PHANTOM" or "3 STEREO" is displayed, press **DOLBY PRO LOGIC** repeatedly until "NORMAL" is selected.

2 Press MANUAL SELECT and hold it down for about four seconds until "L" flashes.

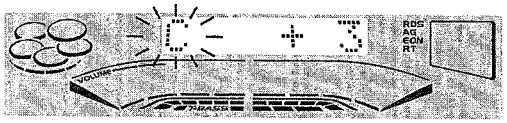


A noise signal is sent to each channel in turn in the following sequence.

→ **L**: Left speaker → **C**: Center speaker → **R**: Right speaker →
← **LS**: Left surround speakers ← **RS**: Right surround speakers ←

3 Adjust the sound level of the center and the surround speakers.

While "C" or "RS" or "LS" is displayed, press ◀◀ or ▶▶ to adjust the volume of the center or each surround speaker to match the level of the front speakers.



To adjust the balance between the left and right front speakers, see page 8.

4 Press MANUAL SELECT again to stop the noise signal.

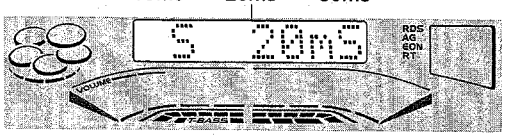
NOTE

- If the surround speakers or the center speaker level of the DOLBY PRO LOGIC is changed, that of the DOLBY DIGITAL SURROUND (page 24) are also changed.
- While "LS" or "RS" is displayed, both surround speakers output the noise signal together. However, only the sound level of one surround speaker displayed as "LS" or "RS" can be adjusted.
- When the sequencer outputs a noise signal, a clicking sound might be heard from the speakers due to the characteristics of the circuit. This is not malfunction.

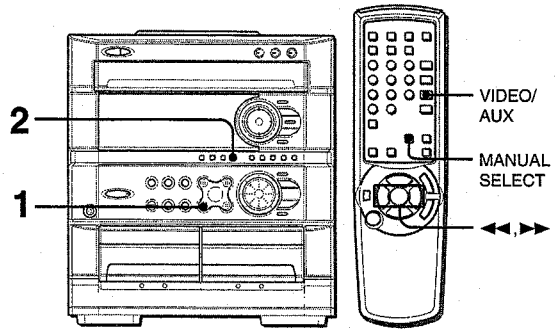
To change the delay time

The surround speakers reproduce sounds a split second after the front speakers. The delay is initially set to 20 ms (milliseconds).
To change this standard delay time, press **MANUAL SELECT** on the remote control repeatedly in NORMAL or PHANTOM mode until delay time is displayed. Then, press ◀◀ or ▶▶ on the remote control. Each time one of the buttons is pressed, the delay time changes as shown below.

15ms ↔ 20ms ↔ 30ms



PLAY WITH DOLBY PRO LOGIC



1 Press VIDEO/AUX/PHONO 5.1 CH and start playback of the video source.

2 Press DOLBY PRO LOGIC.
NORMAL is selected, and the playback sound has the DOLBY PRO LOGIC effect.

To cancel DOLBY PRO LOGIC mode
Press **DOLBY PRO LOGIC** repeatedly until "OFF" is displayed.

To change the sound levels during playback
After adjusting the balance with the noise sequencer, the sound levels of the center or each surround speaker can be adjusted during playback of laser discs or video software.
1 Press **MANUAL SELECT** on the remote control repeatedly to select "C" (center) or "RS" (right surround) or "LS" (left surround).
2 While the "C" or "RS" or "LS" is displayed, press ◄◄ or ►► on the remote control to adjust the volume.

ADDITIONAL DOLBY PRO LOGIC MODES

In addition to the NORMAL mode, this unit is also equipped with the PHANTOM and the 3 STEREO modes.
PHANTOM mode: Use this mode when no center speaker is connected. The center channel signals are output through the left and right speakers.
3 STEREO mode: Use this mode when no surround speakers are connected. This mode reproduces rear sounds through the front speakers.

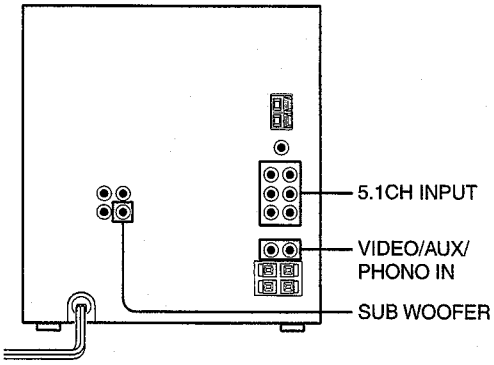
To select PHANTOM or 3 STEREO
Press **DOLBY PRO LOGIC** repeatedly until the desired Dolby Pro Logic mode is displayed. The DOLBY PRO LOGIC mode is displayed cyclically as follows.

NORMAL → PHANTOM → 3 STEREO → OFF (cancel) → NORMAL

To adjust the balance of connected speaker sound levels
Carry out steps 2 to 4 on page 21.

NOTE
- Depending on the sound source and/or listening conditions, surround effect may not be obtained even when the DOLBY PRO LOGIC is on.
- The full DOLBY PRO LOGIC effect cannot be obtained when using software without DOLBY SURROUND mark.
- The DOLBY PRO LOGIC is automatically cancelled when:
  – the headphones are plugged in.
  – the 5.1 CH (page 24) is selected.

CONNECTING OPTIONAL EQUIPMENT



Refer to the operating instructions of the connected equipment for details.
- The connecting cords are not supplied. Obtain the necessary connecting cords.
- Consult your local Aiwa dealer for optional equipment.

VIDEO/AUX/PHONO IN JACKS

This unit can input analog sound signals through these jacks. Use a cable with RCA phono plugs to connect audio equipment (LD player, MD player, VCR, TV, etc.).
Connect the red plug to **VIDEO/AUX/PHONO IN R** jack, and the white plug to **VIDEO/AUX/PHONO IN L** jack.

When connecting a turntable
Use an Aiwa turntable equipped with a built-in equalizer amplifier.

SUB WOOFER JACK

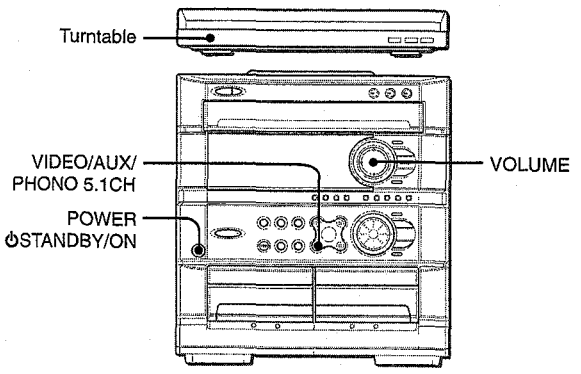
Connect an optional powered sub woofer with a built-in amplifier to the jack.

NOTE
SUB WOOFER output jack is designed to reproduce the DOLBY DIGITAL SURROUND sound.

5.1CH INPUT JACKS

This unit can input sound signals from the audio equipment (DVD players, LD players, etc.) that contains a Dolby Digital decoder with the 5.1ch output terminals. Refer to "CONNECTING A DVD PLAYER" on page 24.

TURNTABLE OPERATION



Preparation

- Connect the supplied stereo turntable to the main unit. (See page 4)
- Set **EQUALIZER AMP.** selector on the turntable to ON position. (Refer to the operating instructions of the turntable for details.)

1 Press VIDEO/AUX/PHONO 5.1CH on the main unit.

"VIDEO" appears on the display.
The source name on the display can be changed to "PHONO". (See "LISTENING TO EXTERNAL SOURCES".)

2 Adjust the volume to minimum.

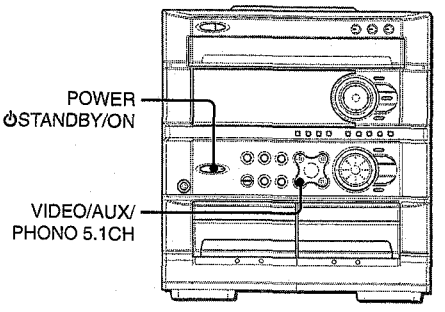
Turn **VOLUME** counterclockwise until "VOL 0" is displayed.

3 Play the turntable.

Refer to the operating instructions of the turntable for details.

4 Adjust the volume according to your preference.

LISTENING TO EXTERNAL SOURCES



To play equipment connected to the **VIDEO/AUX/PHONO IN** jacks, proceed as follows.

***1* Press VIDEO/AUX/PHONO 5.1CH.**

"VIDEO" appears on the display.

***2* Play the connected equipment.**

To change a source name on the display

When **VIDEO/AUX/PHONO 5.1CH** is pressed, "VIDEO" is displayed initially. It can be changed to "AUX", "TV" or "PHONO". With the power on, press **POWER** while pressing **VIDEO/AUX/PHONO 5.1CH**. When the "5.1ch IN" is displayed, press **VIDEO/AUX/PHONO 5.1CH** again to see the changed source name. Repeat the procedure to select one of the names.

To adjust the sound level of equipment connected to the VIDEO/AUX/PHONO IN jacks

When the sound level of the external source is much higher or much lower than that of other function sources, adjust it as follows.

1 Press **VIDEO/AUX/PHONO 5.1CH** and play the equipment.
2 Press ◄◄ or ►► until the sound level becomes the same as that of other function sources.

NOTE

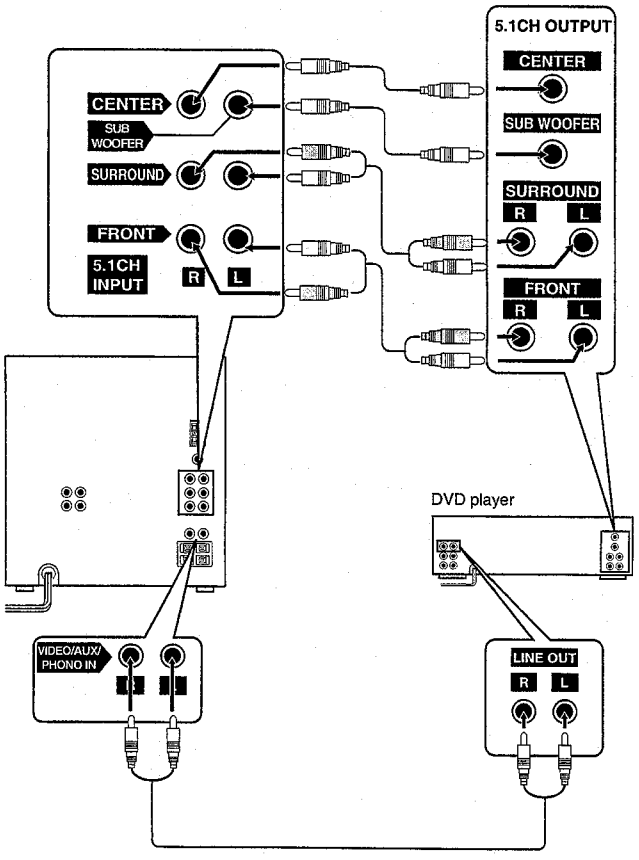
- During recording, the sound level cannot be adjusted.

CONNECTING A DVD PLAYER

5.1CH INPUT jacks of this unit support the DOLBY DIGITAL SURROUND system.
Connect a DVD player with 5.1 CH output jacks to this unit using cables with RCA phono plugs as follows:

This unit's jack	DVD player's jack
5.1CH INPUT FRONT (L, R)	5.1CH OUTPUT FRONT (L, R), etc.
5.1 CH INPUT SURROUND (L, R)	5.1CH OUTPUT SURROUND (L, R), etc.
5.1 CH INPUT CENTER	5.1CH OUTPUT CENTER, etc.
5.1CH INPUT SUB WOOFER	5.1CH OUTPUT SUB WOOFER, etc.
VIDEO/AUX/PHONO IN (L, R)	LINE OUT (L, R), etc

(See NOTE.)

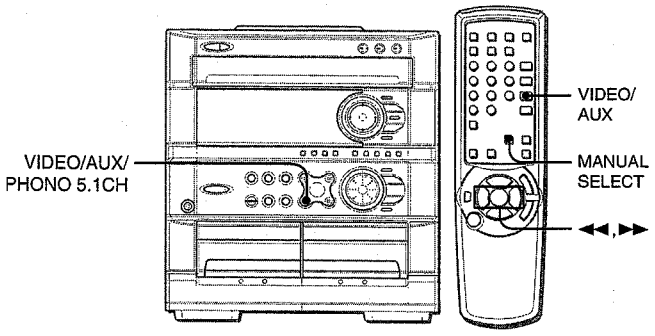


NOTE

- If the DVD is not connected to **VIDEO/AUX/PHONO IN** jacks:
  - the spectrum analyzer does not show the sound level of the DVD player.
  - the sound from the connected DVD player cannot be recorded.

  To remove these limitations, connect the **LINE OUT** jacks of the DVD player to **VIDEO/AUX/PHONO IN** jacks of this unit besides connecting to **5.1 CH INPUT** jacks.
  The signals through **VIDEO/AUX/PHONO IN** jacks enable the spectrum analyzer to work and the recording to be done.
  Refer also to the operating instructions of the DVD player.
- DOLBY DIGITAL SURROUND sound cannot be recorded in any way.

LISTENING TO DOLBY DIGITAL SURROUND SOUND



When a DVD player is connected to the **5.1CH INPUT** jacks of this unit, you can listen to DOLBY DIGITAL SURROUND sound, which enables you to enjoy theater-quality sound in your home.

1 **Press VIDEO/AUX/PHONO 5.1 CH repeatedly until "5.1ch IN" is displayed.**
DOLBY DIGITAL SURROUND is turned on.

2 **Press ◀◀ or ▶▶ to adjust the input level while "5.1ch IN" is displayed.**
The input level can be selected from MIN (0) to MAX (7).

3 **Start playing DOLBY DIGITAL SURROUND sound on the DVD player.**

NOTE

- Make sure the program played back with the connected equipment support the DOLBY DIGITAL SURROUND.
- The function is changed from the 5.1 CH to the VIDEO when:
  - the headphones are plugged in.
  - the DOLBY PRO LOGIC is turned on.

To adjust the sound levels of the speakers while listening to the source (DOLBY DIGITAL SURROUND)
Use remote control.

1 Press **VIDEO/AUX/PHONO 5.1CH** repeatedly until "5.1ch IN" is displayed.
DOLBY DIGITAL SURROUND is turned on.
2 Press **MANUAL SELECT** on the remote control repeatedly.
Speaker names appear in turn as follows:

S-W (Sub woofer) → L/R (Front Left/Right) → C (Center) → RS (Right Surround) → LS (Left Surround) →

3 Press ◀◀ or ▶▶ to adjust the sound level while "L/R", "C", "RS", "LS" or "S-W" is displayed.
4 Repeat steps 2 and 3 to adjust each speaker's sound level.

NOTE

If the surround speakers or the center speaker level of the DOLBY DIGITAL SURROUND is changed, that of the DOLBY PRO LOGIC (page 21) are also changed.

CARE AND MAINTENANCE

Occasional care and maintenance of the unit and the software are needed to optimize the performance of your unit.

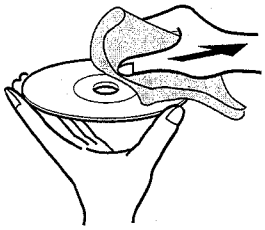
To clean the cabinet
Use a soft dry cloth.
If the surfaces are extremely dirty, use a soft cloth lightly moistened with mild detergent solution. Do not use strong solvents, such as alcohol, benzine or thinner as these could damage the finish of the unit.

To clean the tape heads
When the tape heads are dirty;
- high frequency sound is not emitted
- the sound is not adequately high
- the sound is off-balance
- the tape cannot be erased
- the tape cannot be recorded on

After every 10 hours of use, clean the tape heads with a head cleaning cassette.
Refer to the instructions of the cleaning cassette for details.

To demagnetize the tape heads
The tape heads may become magnetized after long-term use. This may narrow the output range of recorded tapes and increase noise.
After every 20 to 30 hours of use, demagnetize the tape heads with a separately sold demagnetizing cassette.
Refer to the instructions of the demagnetizing cassette for details.

Care of discs
- When a disc becomes dirty, wipe the disc from the center out with a cleaning cloth.



- After playing a disc, store the disc in its case. Do not leave the disc in places that are hot or humid.

Care of tapes
- Store tapes in their cases after use.
- Do not leave tapes near magnets, motors, television sets, or any source of magnetism. This will downgrade the sound quality and cause noise.
- Do not expose tapes to direct sunlight, or leave them in a car parked in direct sunlight.

TROUBLESHOOTING GUIDE

If the unit fails to perform as described in these Operating Instructions, check the following guide.

GENERAL
There is no sound.
- Is the AC cord connected properly?
- Is there a bad connection? (→ page 4)
- There may be a short circuit in the speaker terminals.
  → Disconnect the AC cord, then correct the speaker connections.
- Was an incorrect function button pressed?

Sound is emitted from one speaker only.
- Is the other speaker disconnected?

An erroneous display or a malfunction occurs.
→ Reset the unit as stated below.

The unit blacks out when the power is turned off.
- Is the power economizing mode set to "ECO ON" or "ECO AUTO"? (→ page 7)

The power is not turned on
→ Disconnect the AC cord, and connect it again in a few seconds.

TUNER SECTION
There is constant, wave-like static.
- Is the antenna connected properly? (→ page 5)
- Is the signal weak?
  → Connect an outdoor antenna.

The reception contains noise interferences or the sound is distorted.
- Is the system picking up external noise or multipath distortion?
  → Change the orientation of the antenna.
  → Move the unit away from other electrical appliances.

CASSETTE DECK SECTION
The tape does not run.
- Is deck 2 in pause mode? (→ page 13)

The sound is off-balance or not adequately high.
- Is the playback head dirty? (→ page 25)

Recording is not possible.
- Is the erasure prevention tab on the tape broken off? (→ page 15)
- Is the recording head dirty? (→ page 25)

Erasure is not possible.
- Is the erasure head dirty? (→ page 25)
- Is a metal tape being used?

High frequency sound is not emitted.
- Is the playback head dirty? (→ page 25)

CD PLAYER SECTION
The CD player does not play.
- Is the disc correctly placed? (→ page 14)
- Is the disc dirty? (→ page 25)
- Is the lens affected by condensation?
  → Wait approximately one hour and try again.

To reset
If an unusual condition occurs in the display window or the cassette decks, reset the unit as follows.
1 Press **POWER** to turn off the power.
2 Press **POWER** to turn the power back on while pressing **■CLEAR**. Everything stored in memory after purchase is canceled.

If the power cannot be turned off in step 1 because of a malfunction, reset by disconnecting the AC cord, and connect it again. Then carry out step 2.

SPECIFICATIONS

Main unit CX-ZHT540

FM tuner section

Tuning range	87.5 MHz to 108 MHz
Usable sensitivity (IHF)	13.2 dBf
Antenna terminals	75 ohms (unbalanced)

MW tuner section

Tuning range	531 kHz to 1602 kHz (9 kHz step) 530 kHz to 1710 kHz (10 kHz step)
Usable sensitivity	350 µV/m
Antenna	Loop antenna

LW tuner section

Tuning range	144 kHz to 290 kHz
Usable sensitivity	1400 µV/m
Antenna	Loop antenna

Amplifier section

Power output	**Front** Rated: 56 W + 56 W (6 ohms, T.H.D. 1 %, 1 kHz) Reference: 70 W + 70 W (6 ohms, T.H.D. 10 %, 1 kHz) **Rear (Surround)** Rated: 16 W + 16 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference: 20 W + 20 W (8 ohms, T.H.D. 10 %, 1 kHz) **Centre** Rated: 16 W (8 ohms, T.H.D. 1 %, 1 kHz) Reference: 20 W (8 ohms, T.H.D. 10 %, 1 kHz)
Total harmonic distortion	0.15 % (30 W, 1 kHz, 6 ohms, DIN AUDIO/Front)
Inputs	VIDEO/AUX/PHONO: 320 mV (adjustable) 5.1CH INPUT: FRONT: 180 mV SURROUND: 180 mV CENTER: 180 mV SUB WOOFER: 100 mV
Outputs	SUB WOOFER: 1V SPEAKERS: accept speakers of 6 ohms or more SURROUND SPEAKERS: accept speakers of 8-16 ohms or more CENTER SPEAKERS: accept speakers of 8 ohms or more PHONES (stereo jack): accepts headphones of 32 ohms or more

Cassette deck section

Track format	4 tracks, 2 channels stereo
Frequency response	50 Hz – 10000 Hz
Recording system	AC bias
Heads	Deck 1: Playback head × 1 Deck 2: Recording/playback × 1, Erase head × 1

Compact disc player section

Laser	Semiconductor laser (λ = 780 nm)
D-A converter	1 bit dual
Signal-to-noise ratio	85 dB (1 kHz, 0 dB)
Harmonic distortion	0.05 % (1 kHz, 0 dB)
Wow and flutter	Unmeasurable

General

Power requirements	230 V AC, 50 Hz
Power consumption	160 W
Dimensions of main unit (W × H × D)	360 × 395.3 × 350.6 mm
Weight of main unit	8.6 kg

Speaker system SX-ZL520

Cabinet type	3 way, bass reflex
Speakers	Woofer: 220 mm cone type Tweeter: 60 mm cone type Super tweeter: 20 mm ceramic type
Impedance	6 ohms
Output sound pressure level	89 dB/W/m
Dimensions (W × H × D)	260 × 495 × 314 mm
Weight	6.1 kg

Specifications and external appearance are subject to change without notice.

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Please check the laws on copyright relating to recordings from discs, radio or external tape for the country in which the machine is being used.

DOLBY PRO LOGIC

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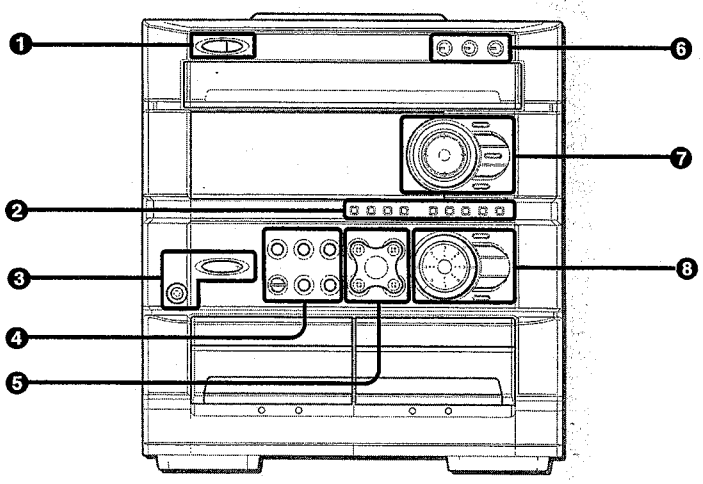

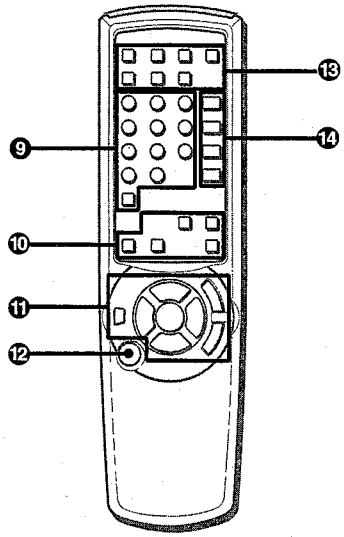

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